[Element on the Move](http://www.open2.net/science/element/html/) Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In order to answer these questions, you will have to click on the vocabulary on the left and move the carbon molecule around in the simulation. You will have to reset in order to explore options.

The carbon molecule in this simulation starts out in the atmosphere.

1. What are the two processes that can remove carbon from the atmosphere?

2. Where are the two places that carbon can go from the atmosphere?

3. Find at least one path that carbon might take where it starts in the atmosphere, moves to another reservoir, then immediately back to the atmosphere. What are the two processes and what is the other reservoir?

4. All plants do photosynthesis, but it is not possible for you to move the carbon atom directly from the atmosphere to sea plants. Where does it have to go first and what process is used?

5. Figure out how carbon gets from the atmosphere to the bottom of the ocean in the form of marine carbonate sediment. List the processes and the intermediary reservoirs.

6. On average, how long does a carbon atom stay in the marine carbonate sediment?

7. Find the two places where carbon resides the longest. What are they and how long does it stay?

8. Find the two places where carbon resides the shortest. What are they and how long does it stay?

9. There is no river in this simulation. How would carbon get into a river and where would it go from there?

10. What are sinking and upwelling? Where does it take the carbon?

11. Try to find the longest chain of carbon movement that you can before the carbon returns to the atmosphere. Record each process and each reservoir.

12. We used another word for “processes”. What is it? What do they do in general?